

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1-35. (Cancelled)

36. (New) A non-human transgenic mammal, which comprises an IgH locus modified by replacing a switch sequence S μ with all or part of a transgene consisting of a C α gene for a human class A immunoglobulin, comprising at least an exon encoding the CH3 domain and a membrane exon.

37. (New) The non-human transgenic mammal of claim 36, which is homozygous for said modified IgH locus.

38. (New) The non-human transgenic mammal of claim 36, wherein said IgH locus is modified by replacing the switch sequence S μ with the entire C α gene.

39. (New) The non-human transgenic mammal of claim 36, wherein IgH locus is modified by replacing the switch sequence S μ with the segment of the C α gene comprising the exon encoding the CH3 domain and the membrane exon.

40. (New) The non-human transgenic mammal of claim 36, wherein said C α gene is C α 1.

41. (New) The non-human transgenic mammal of claim 36, which further comprises another transgene encoding a human immunoglobulin light chain.

42. (New) The non-human transgenic mammal of claim 41, wherein said light chain is a kappa chain.
43. (New) The non-human transgenic mammal of claim 42, wherein said transgene comprises the intronic activator E μ upstream and the palindrome *hs3a/hs1,2/hs3b* downstream.
44. (New) The non-human transgenic mammal of claim 43, wherein said transgene is under the control of the promoter of the human immunoglobulin heavy chain.
45. (New) The non-human transgenic mammal of claim 41, which is dizygous for said transgene.
46. (New) The non-human transgenic mammal of claim 41, which possesses an endogenous locus of the inactivated kappa chain.
47. (New) The non-human transgenic mammal of claim 46, which is homozygous for said endogenous locus of the inactivated kappa gene.
48. (New) The non-human transgenic mammal of claim 36, which possesses a gene encoding the inactivated J chain.
49. (New) The non-human transgenic mammal of claim 48, which is homozygous for said gene encoding the inactivated J chain.
50. (New) The non-human transgenic mammal of claim 48, which comprises another transgene encoding a human immunoglobulin J gene.
51. (New) The non-human transgenic mammal of claim 36, which is a transgenic mouse.
52. (New) A transgenic mouse of claim 51, which comprises:

a) an IgH locus modified by replacing the switch sequence S μ with the entire C α 1 gene for a human class A immunoglobulin, and

b) a complete V κ gene comprising rearranged V κ I gene with a J κ 5 gene, the J κ -C κ intron and C κ gene, under the transcriptional control of the promoter of the human heavy chain (pVH), the intronic activator E μ upstream and the palindrome *hs3a/hs1,2/hs3b* downstream.

53. (New) A homologous recombination targeting vector, which comprises a C α gene for a human class A immunoglobulin or a segment of the gene comprising at least an exon encoding a CH3 domain and a membrane exon, flanked by fragments of sequences of the IgH locus from a non-human mammal which are adjacent to a S μ sequence.

54. (New) The targeting vector of claim 53, which comprises a cassette for expressing a selection marker, adjacent to said C α gene or to a segment of said gene.

55. (New) The targeting vector of claim 54, wherein said expression cassette is flanked by site-specific recombination sequences.

56. (New) The targeting vector of claim 54, wherein sequences are LoxP sequences of Cre recombinase.

57. (New) The targeting vector of claim 53, wherein said fragments of sequences which are adjacent to the S μ sequence are of murine origin.

58. (New) The targeting vector of claim 56, wherein the C α gene or the segment of said gene is flanked, in 5' and in 3' respectively, by fragments corresponding to positions 131281 to 136441 and 140101 to 145032 in the sequence of murine chromosome 12 (accession number AC073553 in the EMBL/Genbank database).

59. (New) An embryonic cell of a non-human mammal, modified with the targeting vector of claim 53.

60. (New) A method for preparing humanized class IgA antibodies or fragments thereof, which comprises at least the following steps:

a) immunizing a non-human transgenic mammal of claim 36, and,

b) producing humanized class IgA antibodies or fragments of the antibodies from serum, secretions or B lymphocytes of said non-human transgenic mammal sacrificed beforehand.

61. (New) The method of claim 60, wherein the non-human transgenic mammal is a transgenic mouse.

62. (New) A humanized class IgA antibody produced by the method of claim 60, which comprises a chimeric heavy chain in which the constant domains are of human origin and a human light chain in which the variable domain is encoded by V κ I-J κ 5.

63. (New) A fragment of a humanized class IgA antibody of claim 62, which comprises a fragment of said heavy and light chains.

64. (New) The humanized class IgA antibody fragment of claim 63, which is selected from the group consisting of the Fab, Fab'2 and Fc fragments.

65. (New) A medicament, which comprises a humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63.

66. (New) A diagnostic reagent, which comprises a humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63.

67. (New) An immunogenic or vaccine composition, which comprises at least one humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63, combined with an antigen.
68. (New) A pharmaceutical composition, which comprises at least one humanized class IgA antibody of claim 62, or a fragment of the antibody of claim 63; with an active ingredient.
69. (New) A method of preparing a reagent, which comprises combining at least one humanized class IgA antibody of claim 62, or a fragment thereof of claim 63, with an active ingredient.
70. (New) A method of treating infectious diseases or cancer, which comprises administering at least one humanized class IgA antibody of claim 62, or a fragment thereof of claim 63, to a mammal in need thereof.
71. (New) The method of claim 70, wherein the mammal is a human.
72. (New) The method of claim 70, for treating infectious diseases.
73. (New) The method of claim 70, for treating cancer.